Tadiran Medium Power Lithium Organic Cell
Model TLM-1520MP

1. **Scope**

This data sheet describes the mechanical design and performance of Tadiran medium power lithium organic cell model TLM-1520MP.

2. **Characteristics**

2.1. **Physical**

2.1.1. Length: 20 -1 mm.

2.1.2. Diameter: 14.8 ±0.3 mm.

2.1.3. Weight: 9 gr. max.

2.2. **Electrical**

2.2.1. Open Circuit Voltage (for batteries stored at RT for 1 year or less) 4.02 to 4.07 V

2.2.2. Closed Circuit Voltage (at 0.1 sec) at 0.25 A load 3.85 minimum

2.2.3. Discharge

- Discharge capacity at 12 mA @ RT to 2.8 V 200 mAh
- Discharge capacity at 125 mA @ RT to 2.8 V 170 mAh

2.3. **Operating Temperature Range:** -40 °C to 85 °C

2.4. **Accumulated Capacity Loss**:

<table>
<thead>
<tr>
<th>Storage Temperature</th>
<th>22 °C</th>
<th>55 °C</th>
<th>72 °C</th>
<th>85 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Time [Y]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2 %</td>
<td>4 %</td>
<td>7 %</td>
<td>TBD</td>
</tr>
<tr>
<td>5</td>
<td>5 %</td>
<td>15 %</td>
<td>28 %</td>
<td>N/A</td>
</tr>
<tr>
<td>10</td>
<td>7.5 %</td>
<td>22 %</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>15</td>
<td>10 %</td>
<td>29 %</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>20</td>
<td>12.5 %</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* When tested at RT under 12 mA to 2.8 V

2.5. **Cell impedance:** Less than 300 mOhm @ 1 kHz at room temperature.
2.6. Performance Data:

Discharge capability at RT

![Discharge capability graph]

Pulse capability at RT

![Pulse capability graph]
Discharge capability @ 0.25A at several temperatures

![Discharge capability graph]

Pulse capability @ 0.25A at several temperatures

![Pulse capability graph]
2.7.  End of life indication:

OCV measurements can provide a good estimation for the remaining capacity of the cell as shown below.

**Capacity vs. OCV**

![Graph showing Capacity vs. OCV]

2.8.  Safety tests:

The cell has successfully passed the following safety tests:

- Short circuit at RT and at 55°C
- Oven at 150°C
- Impact
- Nail penetration
- Over charge and over discharge